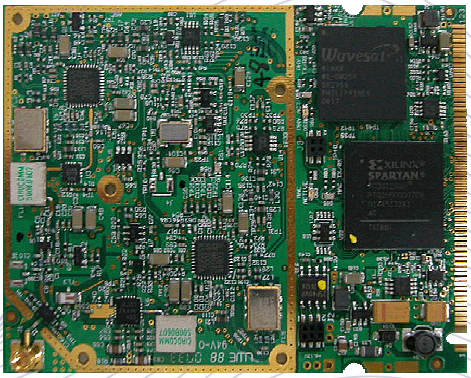

# XM9W00

## IEEE 802.16d WiMAX 3.5GHz mPCI module

### Introduction

WiMAX is a Worldwide Interoperability for Microwave Acess. To combine WiMAX with current wireless technology, it makes a better performance at longer distance and faster transmission.

The XM9W00 Mini-PCI module integrates the latest WiMAX technology, and fully complies with IEEE 802.16d standard to provide the customer to tailor the motherboard, providing the higher layer application processor and peripherals according to their specific needs.

### Features

- Compliant with PCI 2.3 Standard
- Support WiMAX profM3_PMP profile.
- Support 802.16-2004 and provides forward compatibility with IEEE 802.16d for basic mobility.
- Reduces your time to market and development costs.
- Duplex Modes: TDD and HFDD with 3.5GHz RF card.
- Supports Quality of Service (QoS)
- IEEE 802.3 Convergence Sub Layer support.
- Downlink/Uplink remote management.
- Real-Time Linux Based OS.
- Embedded WiMAX testing functions.

### Specification

| | | | |
|---|---|---|---|
| Standard | IEEE 802.16-2004, HiperMAN/WiMAX Fixed profile | | |
| Modulation | OFDM (BPSK, QPSK, 16-QAM, 64-QAM) | | |
| RF Frequency | 3.4 - 3.6GHz in 250KHz steps | | |
| Duplexing Method | TDD & HFDD | | |
| Bandwidth | 3.5MHz & 7MHz | | |
| TX Maximum output power (at antenna port) | 20dBm | | |
| TX Dynamic Range | 30dB | | |
| Relative TX Constellation Error (@ Maximum output power) | Burst Type | IEEE Spec. [dB] | Typical [dB] |
| | BPSK 1/2 | -13.0 | -31.5 |
| | QPSK 1/2 | -16.0 | -31.5 |
| | QPSK 3/4 | -18.5 | -31.5 |
| | 16-QAM 1/2 | -21.5 | -31.5 |
| | 16-QAM 3/4 | -25.0 | -31.5 |
| | 64-QAM 2/3 | -29.0 | -31.5 |
| | 64-QAM 3/4 | -30.0 | -31.5 |
| Maximum RX power (BER< $10^{-6}$ ) | -20dBm | | |
| Maximum tolerable RX power | 0dBm | | |
| Maximum RX Receiver Sensitivity (3.5MHz BW, BER< $10^{-6}$ ) | Burst Type | IEEE Spec. [dBm] | Typical [dBm] |
| | BPSK 1/2 | -93.1 | -95.0 |
| | QPSK 1/2 | -90.1 | -93.0 |
| | QPSK 3/4 | -87.6 | -89.5 |
| | 16-QAM 1/2 | -84.6 | -86.5 |
| | 16-QAM 3/4 | -81.1 | -83.0 |
| | 64-QAM 2/3 | -77.1 | -79.0 |
| | 64-QAM 3/4 | -75.1 | -77.0 |
| RX Input Dynamic Range | 30dB | | |

### Board Mechanical/Rating

| | |
|---|---|
| Dimension | 59.75mm (W) * 80.00mm(L), PCB thickness 1mm |
| Operating Voltage | 3.3V, 5V (through Mini-PCI connector) |
| Average Power Consumption | ≦4.7W |
| Operating Temperature | 0℃ ~ +55℃ ambient temperature |
| Storage Temperature | -20℃~70℃ ambient temperature |
| Operating humidity | 90% maximum (non-condensing) |
| Storage humidity | 90% maximum (non-condensing) |

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